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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,258	04/18/2001	Yi-Fan Chen	NAUP0280USA	6073

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NAIPO (NORTH AMERICA INTERNATIONAL PATENT OFFICE)
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER

HUYNH, ANDY

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 05/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/836,258

Applicant(s)

CHEN ET AL.

Examiner

Andy Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 7-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. In Election/Restrictions Response, applicants' election the invention of the Group I (claims 1-6), drawn to a device, and cancel claims 7-14 in Paper No. 3 dated on February 22, 2002, is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilford (U.S. Patent No. 6,342,723).

Regarding claim 1, Wilford discloses in Figs. 1 and 2A a bypass circuit (32, 34, 44) for reducing plasma damage to a gate oxide 22 (col. 3, line 27) of a metal-oxide semiconductor (MOS) wafer, the bypass circuit positioned on a semiconductor wafer 12, the semiconductor wafer comprising a substrate 12 (col. 3, line 13), the MOS transistor 14 (col. 3, line 8), a dielectric layer 40 (col. 3, line 65), and the bypass circuit, respectively, with the bypass circuit comprising:

a conductive wire 32 (col. 3, lines 38-39) comprising at least a first contact end and a second contact end (see Fig. 1), the first contact end electrically connecting with a gate electrode

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26 (col. 3, line 33) on the top of the MOS transistor, and the second contact end electrically connecting with a doped region P+ (col. 3, line 50) in the substrate; and

a fusion area 34 (col. 3, line 42) positioned in the conductive wire to disconnect the conductive wire and the MOS transistor;

wherein ions in the gate oxide are transmitted to the doped region via the conductive wire so as to reduce plasma damage to the gate oxide (col. 4, lines 8-11).

Regarding claim 2, Wilford discloses in Figs. 1 and 2A the bypass circuit of claim 1 wherein the conductive wire is composed of a plurality of contact plugs 42 and a metal layer 44 (col. 4, lines 18-20).

Regarding claim 3, Wilford discloses in Figs. 1 and 2A the bypass circuit of claim 1 wherein the conductive wire is a portion of a metal interconnect layer 44 (col. 4, lines 18-21).

Regarding claim 4, Wilford discloses in Figs. 1 and 2A the bypass circuit of claim 1 wherein the fusion area is made of polysilicon (col. 3, lines 31-32).

Regarding claim 5, Wilford discloses in Figs. 1 and 2A the bypass circuit of claim 1 wherein the doped region is an n-well (col. 3, lines 15-17).

Regarding claim 6, Wilford discloses in Figs. 1 and 2A the bypass circuit of claim 1 wherein ions in the gate oxide are transmitted to the doped region via the conductive wire to neutralize the ions in the doped region so as to reduce plasma damage to the gate oxide (col. 4, lines 8-11).

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Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Noguchi'939, Brooks et al.'155, Hsu et al.'261, Noguchi'292, Wang'347, Beatty'433, Yamada et al.'031, Malladi et al.'930, Diaz'445, tsui'566, Wu'751, and Malladi et al.'240 are cited as of interest.

4. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy Huynh, (703) 305-0089. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. The examiner's supervisor, David Nelms can be reached on (703) 308-4910. The Fax number for the organization where this application or proceeding is assigned is (703) 308-7724. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose phone number is (703) 308-0956.



ah

04/29/02



**HOAI HO
PRIMARY EXAMINER**